

business. As noted, "and I certainly believe we will make a mistake if we have to wait a year or so while someone designs and produces a big bomb for us to practice with." Although he was not overly concerned with his bombardiers' proficiency, Blanchard realized that

... there are more people connected with the delivery of an atomic bomb than a bombardier. It can be said that heavy equipment handlers can be trained in a week or two, armament people can be trained in a week or two, and that hoist operators etc can be trained in a week or two. I will say to you that in two weeks to a month, we can also train pilots to be bombardiers, but we don't do it. ... While your big thinking is in terms of a year from today, I personally see no more reason for my group to be ready a year from today, than tomorrow, in which case the two weeks necessary to train our ordnance and armament people would not be available.²¹

Three days later, Blanchard again wrote to LeMay about his problems and worries:

Please excuse us for appearing to be a little "pushy" down here, but we are getting more and more afraid that the Air Force is losing their little toe-hold in the atomic bombing business, and our convictions force us to keep pushing.²²

A small but major breakthrough for Air Force atomic operational readiness and planning came in the training and operations of the 509th Bomb Group during the CROSSROADS atomic tests at Bikini Atoll in June-July 1946. The group's assignment to drop the ABLE Day test bomb on 1 July provided a wealth of detailed information. Combined with the extensive United States Strategic Bombing Survey reports on the Hiroshima and Nagasaki explosions and the underwater test late in the month, the ABLE Day test gave clearer indications of the vast combat potential of the atomic bomb as well as of its considerable logistical requirements. The JCS Evaluation Board that met to report on the tests provided another opportunity for the AAF to learn more about the weapon that it alone could use. The Air Force hoped that the resulting official CROSSROADS reports would provide the required knowledge of the bomb and thus permit quantitative planning for atomic warfare.²³

On 5 February 1947, Curt LeMay forwarded to Lieutenant General Lewis Brereton, Chairman of the Military Liaison Committee to the Atomic Energy Commission (AEC), a report prepared by Colonel Turner C. Rogers. The full strategic implications of the atomic bomb on warfare. Rogers stressed, could not be estimated without data on the probable supply of bombs. An unlimited stockpile would entirely change the planning, but in the absence of better information Rogers could only assume a limited supply for the next ten to twenty years. Such uncertainties among top Air Force planners accurately reflected the situation in joint and air war planning.²⁴

Although organizationally the Air Force opted to integrate the atomic bomb within its existing unit and staff structure, doctrine was

different matter altogether. The wartime concept of strategic bombardment, built on the disruption and destruction of the enemy's war-making capacity and will to fight, relied on precision bombing attacks on carefully selected economic-industrial targets. Before the end of the war in Europe, however, tactical requirements such as massed formations for defense and bomb concentration and technological improvements such as all-weather radar bombing had driven the Air Force from precision bombing to a modified area concept.

Against Japan, precision bombardment gave way almost entirely to urban attacks due to the unusual structure of Japan's industrial economy and the vulnerability of its cities to incendiary raids. Twentieth Air Force struck directly at the enemy's urban population and will to fight and indirectly at its war-sustaining industrial structure. The atomic bomb's tremendous destructive power completed the metamorphosis of strategic bombing from a precision instrument to a bludgeon of mass destruction. The Spaatz Board in October 1945 saw that the atomic bomb was, and would remain, primarily an offensive weapon for use against large urban-industrial targets. Technological and tactical imperatives forced Air Force leaders unwillingly but inevitably toward a doctrine of strategic bombing that emphasized attacking the enemy's most vital and populous urban-industrial centers to gain the maximum effect from the few atomic bombs expected to be available.²⁵

Early in 1947, Turner C. Rogers accurately summarized the extent of this doctrinal evolution:

Success in a war of the future will depend more than ever before on the industrial capacity and efficiency of the protagonists, therefore destruction of the enemy's industrial capability will contribute most toward reduction of his ability to wage war. This fact coupled with the character of the atomic explosion leads to the conclusion that the most profitable target for the atomic bomb will be large industrial centers.²⁶

He then summed up the Air Force's view of American atomic strategy:

But more important than defensive measures is the prevention of the initial attack. Fear of retaliation has always been the greatest deterrent to any nation contemplating all-out war. Twice in this century our unpreparedness has led a would be world conqueror to believe he could achieve such success. Japan was well aware of our weakness when she struck at Pearl Harbor. The ability to strike back effectively will be our best guard against attack. ... The possession of a substantial number of atomic weapons and the means of delivering them to any part of the world provides the most potent threat of retaliation known to man.²⁷

The theory of strategic deterrence that formed the heart of subsequent Air Force strategic doctrine coalesced in 1945-1946 and was well devel-

manded. My reply: "What I would do, after issuing an ultimatum, is to destroy Haiphong Harbor and break the Red River dams, putting North Vietnam's rice production and many of her principal cities under ten feet of water. If this didn't produce the desired result, I would give Hanoi the Berlin treatment, then progressively destroy her war-making potential and all her rail transportation, preventing the transfer of weapons and supplies from Russia and China." Johnson said, "You know our people would not stand for that." I answered, "I remember when President Roosevelt had considerable opposition at first in World War II. Perhaps if you had done as he did, acted boldly, then carried your case to the people and gotten this war over with in a year—which would have been possible with the fuller use of naval and air power—you could have had a united people behind you."

In retrospect, how much better it would have been, if necessary, to destroy North Vietnam than to lose our first war. That would have saved us 50,000 American dead, 250,000 Allied dead, and, subsequently, the greatest genocide in this century. Already the Hanoi butchers have murdered or starved to death more than three million men, women, and children in South Vietnam, Laos, and Cambodia.

Air Power Employment in the Future

A constructive look at U.S. air power in the future must be based on a sound analysis of the history of air power employment in past wars, plus an appreciation of the probable economic conditions and political leadership which will exist.

Obviously, there must be an accurate and continuing study of what nuclear weapons and advancing technology will do to aerospace warfare. The radical change in the time factor, as a result of nuclear weapons, must be realized. Never again will we have years or months in which to build armies, navies, and air forces, or to convert our industrial capacity to its full weapons-making potential. We shall win or lose with military power available when the war starts, and the kind of military power required to prevent war is exactly the kind required to win any war which is forced upon us.

Political as well as economic considerations may be decisive. The divisiveness which prevails among our people and their leadership is a current danger, one which is the result, largely, of the lack of adequate political leadership at this critical time. We need a Churchill with the eloquence to arouse our people and their somnolent, divided Congress and with the courage to "tell it like it is" about declining U.S. power and the ominously increasing Soviet power.

Our national leaders have been telling our people that we must have "rough parity" or "essential equivalence" in order to promote detente

in the hope of successful SALT II negotiations. We no longer possess equivalent military power with Russia in either general purpose forces or in strategic nuclear forces. The greatest reason for the current and growing imbalance flows from this decisive fact: Russian leaders are preparing for war, our leaders view nuclear war as "unthinkable."

Warfare today, in a nuclear environment, requires both an offensive and a defensive capability. We have entirely neglected the latter. Russia has put large segments of her defense industry underground; she has provided shelters for her skilled labor force; she has hardened her command and control installations; and all her maneuvers train her military forces to survive and operate in a nuclear environment. We are totally deficient in all these areas.

The CIA has lately admitted that the national estimates of Soviet strength have been low by as much as 50 percent. Thus, if there were a nuclear exchange between the U.S. and the USSR today, at least 100 million Americans would die, while less than 20 million Russians would be killed. Seventy-five percent of our industrial capacity would be destroyed, while more than half of theirs would survive. The knowledge and belief in the Kremlin of the accuracy of these estimates destroys the credibility of our current defense posture.

The most likely scenario for our next and last major emergency may be this: One day, over the hot line from Moscow may come this message to our Commander-in-Chief in the White House. "Mr. President, we order you not to interfere with our operations against Israel. Obviously you will comply for your own Chiefs of Staff will confirm that we have overwhelming military superiority." If present conditions continue much longer, no President of the United States will have any option but to comply with that ultimatum, tantamount to surrender.

Presently, we have, but for only a short time, an alternative. We can begin immediately to regain our military superiority at sea, in the air, and in space. We have ample resources. Only the will and determination of our people and their leaders may be lacking.

...that sound strategic plans, steadfastly pursued by determined national leaders, are essential to victory in war.

3. That the united support of civilian populations on the home front is a decisive factor.

4. The obvious lesson, from the final days of the war against Japan, is that, by the proper employment of sea and air power, a land invasion of enemy territory can be avoided, saving heavy and unnecessary casualties.

This last observation quite naturally raises the question of whether an invasion of Germany would have been required had adequate air power been available. Marshal of the Royal Air Force Sir Arthur Harris, in musing on this possibility, points out that only 17 percent of Allied resources were devoted to air power, 33 percent to the sea war, and 50 percent to the armies. Had these resources been distributed between the three services equally, 33-1/3 percent to each, the RAF could have had 1,000 bombers and the 8th Air Force could have had 1,000 bombers and 1,000 long-range fighters in 1942. In that event, he speculated, a land invasion of the continent might not have been necessary. All the armies would then have had to do was provide an occupation force in Germany as in Japan.

Before leaving World War II and moving on to our subsequent wars in Korea and Vietnam, I propose to pay a deserved tribute to General Carl Spaatz, particularly appropriate before this audience here at the Air Force Academy. He was our senior strategic air power commander, both in Europe and in the Pacific. He was the only general present at the surrender ceremonies both in Berlin and aboard the battleship *Missouri* in Tokyo Bay.

I have often said that he was the only general I knew who never made a mistake. His friendship and influence with General Eisenhower was largely responsible for the generally sound tactical and strategic employment of air power in Europe. His standing with President Truman was a prime influence in obtaining a separate Air Force, co-equal with the Army and Navy, and he was the only candidate to be the first Chief of Staff of the U.S. Air Force.

For the last nineteen years of his life, I was privileged to spend much time with him, from which I have many cherished memories. For example, I was with him when he was inducted into the Aviation Hall of Fame and heard him say, "We must always be prepared to control the air and space above the earth, or join the worms beneath its surface." In 1973, I told him that I had been asked to speak at the Air War College and I would like to take a message from him. He said, "How much time

do you have?" When I told him forty-five minutes, he said, with his mischievous chuckle, "Well, you can't do too much damage in that time." He then grew thoughtful and said, "You may tell them, I think we are getting out of the airplane business too fast and not getting into the space weapons business fast enough." Shortly before his death, he said to me, "Partner, I am beginning to worry about you. I think I'll finish my days in freedom, but I'm not sure you will." The memory of that prophesy fills me with foreboding lately.

"Tooey" Spaatz was quiet, reserved, and miserly with words. If he had brought the Ten Commandments down from the Mount, there would not have been ten Commandments, only one—"Always do right." He has not had, to date, half the credit he deserves in the history of U.S. air power. Fortunately, a book is now being written entitled *Andrews, Arnold and Spaatz*, which, hopefully, will remedy that.

Air Power in Korea and Vietnam

In our war in Korea, air power was employed very effectively in a tactical role in support of ground operations. If our available strategic air power had been employed properly, China's entry into the war could have been prevented. All that would have been necessary would have been to destroy the Yalu bridges and to lay and maintain a strip of mustard gas five miles wide along the Yalu River.

To those who cringe at the use of poison gas, I ask would that not have been preferable to 33,600 American dead? I also assure you that Russia has learned and profited by that lesson. The Soviets emphasize the employment of poison gas in all their maneuvers and maintain a growing chemical warfare capability. They obviously would employ it to stop a Chinese invasion.

In Vietnam, there was a gross failure to employ our available strategic air power properly. In the first place, our political leaders elected to wage a massive land war in Asia against the advice of all our most experienced military leaders. Then, they took counsel of their fears and failed to employ strategic air power fully, believing, erroneously, that this would bring Russia and China actively into the conflict.

In 1966, President Johnson sent for me. (In earlier times we had been close friends. I, having retired in 1947, campaigned for him in 1948, when he first ran for the Senate.) He said, "I understand that in your syndicated columns you have been critical of the way in which I am running this war. All right, wise guy, what would you do?" I replied, "Mr. President, with our preponderant military power and resources, when we cannot persuade Ho Chi Minh to abandon his invasion of South Vietnam, we must be doing something wrong." "Be specific," he de-